

# *Facilitating Holistic Curriculum Development*

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**ABSTRACT** *There is a movement in higher education to think of a curriculum less as a sequence of independent courses and more as a set of highly integrated learning and assessment experiences designed to help students develop clearly defined outcomes. This paper reports on a case study that illustrates how internal curriculum assessment processes used by an environmental science and policy department in an institution of higher education lead to the creation of an innovative tenure-track faculty line for someone whose primary activities and scholarship focus not on traditional disciplinary scholarship but instead on coordinating the holistic development of an integrated curriculum. This paper goes on to show how I, the person hired into this position, am facilitating the coordinated development of a senior thesis programme, a junior entry course into the major and a disciplinary writing programme for the purpose of developing a more integrated curriculum.*

## **Introduction**

Learning that lasts refers to an integration of learning, development, and performance. It connotes change in behavior and flexibility in perspective, enduring commitments, and transformative elements that carry the individual forward through unexpected experience, roles, and life events ... this kind of learning during college connects to performance up to five years postcollege and leads to continuous and confidence learning. (Mentkowski & Associates, 2000, p. xv).

In their inspirational book *Learning That Lasts*, Mentkowski and Associates present a framework for fostering learning that lasts, as defined in the above quotation, through an integration of learning, development and performance. To foster learning that lasts Menkowski and Associates advocate that 'faculty and staff should conceptualize, design, practice, experience, evaluate, and improve curriculum—all as an ongoing process' (2000, p. 288). Achieving this requires that students, staff and faculty foster a curriculum perspective in which 'an integrated understanding of curriculum is fused into one's

work' (Mentkowski & Associates, 2000, p.290). Here I present a case study that illustrates structures and processes, grounded in good assessment practices, that our environmental science and policy department uses to promote a holistic curriculum perspective. First, I show how the use of good assessment practices prompted our department to take an innovative step in higher education: the creation of a tenure-track faculty line for someone whose primary activities and scholarship focus not on traditional disciplinary scholarship but instead on activities that promote holistic curricular development and improvement. Second, I, the person hired into this position, describe the specific structures and processes we are developing to help students, staff and faculty acquire and continually maintain a curriculum perspective.

### **Curriculum Assessment**

Assessment is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development. (Palomba & Banta, 1999, p. 4)

In this section I describe two forms of internal curriculum assessment that our department has used to assess our curriculum: the senior capstone (or thesis) and employer scans. I also show how these practices led to the decision to create the innovative, tenure-track faculty line described above.

#### *The Senior Thesis/Capstone Experience*

California State University, Monterey Bay, opened its doors to students in the autumn of 1996, promising to take a distinctive approach to higher education necessary to prepare students for an increasingly complex world, in part through the creation of new interdisciplinary majors that include a senior capstone experience. The Department of Earth Systems Science and Policy brought together faculty from chemistry, physics, biology, geology, ecology, economics, environmental ethics and teacher education to create an environmental science and policy major designed to provide 'students with the interdisciplinary, critical thinking, and technical skills necessary to develop workable solutions to complex environmental problems' (*Earth Systems Science and Policy Mission Statement*). At the pinnacle of our curriculum is the senior capstone project: a senior thesis 'designed to give students an opportunity to further develop and demonstrate their ability to analyze in depth how an integrated Earth Systems Science and Policy approach can help address current environmental issues' (Earth Systems Science and Policy major description). In collaboration with at least one faculty advisor, students work on their capstone projects over a period of at least two semesters.

The development of our capstone programme is an ongoing process that began in the spring of 1996 (Shapiro, 2002); by the spring of 2000 faculty had adopted a capstone assessment tool that explicitly linked capstone to the rest of the curriculum through major learning outcomes. Each capstone project is assessed in three of our 11 major learning outcomes: our distinguishing systems approach to applied problem solving outcome (which every capstone must demonstrate) and two additional major learning outcomes selected by the student. For example, a student might be assessed on his/her ability to: (i) use a systems approach to applied problem solving; (ii) apply scientific knowledge in the physical and/or life sciences; (iii) acquire, display and analyse quantitative data. Because all capstone outcomes are taught and assessed in upper division courses students take before or simultaneously with capstone, the capstone experience provides students

with the opportunity to apply multiple, previously developed (or developing) skills in a novel context defined by the student. Furthermore, because capstone outcomes are linked to course outcomes, this capstone model allows faculty to assess the extent to which students are able to apply skills taught in individual courses in a new context, usually after the student has completed the course.

Capstone projects vary widely in form and topic, and students are strongly encouraged to develop projects that are relevant to the specific careers they hope to pursue. For example, a student interested in science writing participated in a research trip and then for her capstone wrote a series of three different articles, each for a different audience, about that research trip and its findings (this student is now a science writer for the Department of Fish and Game). A student interested in increasing diversity in the sciences by working with populations historically under-served by higher education created and tested a science curriculum she delivered to low income, ethnically and culturally diverse grammar school students (this student is now the director of an after-school science education programme designed to increase student diversity in the sciences). A student interested in graduate school in the marine sciences developed a capstone that quantified the effects that people walking on the beach had on shorebird foraging behaviour and made specific policy recommendations based on her findings (this student is now a graduate student at a marine research laboratory). Another student interested in environmental law developed a capstone based on an internship that involved testing workplace air quality in a furniture manufacturing company, comparing those results to EPA standards and then making recommendations based on her analysis (this student is now in law school).

### *Using Good Assessment Practices to Promote Holistic Curriculum Thinking*

I am not advocating for capstone as we conceive it as the primary means a department should engage in assessment; individual departments need to develop assessment practices that work within their given departmental and institutional contexts. Nevertheless, some kind of senior year assessment is desirable, for as Gardner *et al.* note, 'the senior year presents an unparalleled opportunity to collect meaningful outcome data for purposes of accountability and to provide meaningful insight regarding the full spectrum of the undergraduate experience' (Gardner & Van der Veer, 1998, p. 10). Whatever the form of assessment, it is important that departments develop appropriate assessment practices for that institution and then use principles of good assessment practice to evaluate and refine those practices. Doing so can lead to the kind of departmental processes and changes illustrated in this case study.

Our capstone process exemplifies several of the American Association for Higher Education's (AAHE) *Principles of Good Practice for Assessing Student Learning* (American AAHE, 1992; Banta, 1997). First, our capstone process 'begins with educational values'. The capstone is not 'an end in itself but a vehicle for educational improvement' (AAHE Principle One). For example, assessment of early capstone projects indicated that students' ability to acquire and process information from the published literature was lacking. As a result, more explicit instruction on information gathering and processing was added to the curriculum. Second, capstone assessment is 'ongoing, not episodic' (AAHE Principle Five). On an individual student level, capstone work is assessed at all stages of project development, beginning with the research pre-proposal and ending with the final assessment of the capstone report. In total, students receive six official assessments on the various stages of their capstone work,

giving students continuous feedback on their capstone work. On a curriculum level, assessment is continuous because assessment of student capstone work occurs every semester, giving staff and faculty continuous feedback on the effectiveness of our curriculum.

In identifying other characteristics of good assessment practices, Harris and Sansom point out that the 'more congruent a faculty member's mode of inquiring about students' learning and the instructor's teaching is with the discipline's mode of inquiry, the more the faculty member is likely to learn from reflecting on assessment of student learning' (Harris & Sansom, 2000, p. 19). They also note that the 'ways of knowing and learning should be deeply connected with a practitioner's work. Assessment of student performance in a discipline should reflect the mode of inquiry of the discipline involved' (Harris & Sansom, 2000, p. 18). The intimate connections among capstone projects, faculty expertise and students' career aspirations (as illustrated in the previous section) make our senior capstone an authentic and consequently powerful tool for assessing not only student performance, but also curriculum effectiveness. The power of our capstone as a form of programme assessment is that in contrast to, for example, a standardised exam, the capstone project typically has students apply their skills in contexts they will experience again in the workplace or graduate school. Harris and Sansom also note that assessment is strongest when it is embedded in the curriculum rather than something added on to it (Harris & Sansom, 2000, p. 18). This too is true of our capstone experience. From the beginning, the capstone requirement has been an integral part of our major and, as described above, was intimately and explicitly connected to individual courses through explicit learning outcomes.

I believe that the most powerful aspect of our capstone assessment process with regards to helping faculty gain a curriculum perspective is our two-reader system of assessment. Every capstone is assessed by two of our faculty members: the capstone advisor and a second reader who typically has not been involved in the capstone project. Harris and Sansom (2000, p. 22) note 'we could do much better to improve assessment in American undergraduate education by greater use of second readers of student work'. In advocating a two-reader system, Harris and Sansom focus on the benefits of a two-reader system with regards to fair and accurate assessment of student work. In support of this argument, they quote Claude Rawson, Yale's Maynard Mack Professor of English: 'On two-reader assessment, it is not only important, but essential to ensure integrity in a grading system that is otherwise at the mercy of every whim, personal or political prejudice, ambition, desire to be liked, vindictiveness, or any number of unconscious biases in any of us' (Harris & Sansom, 2000, p. 22).

However, the benefits of a two-reader system extend far beyond ensuring fair and accurate assessment of student work: it is also a powerful tool for facilitating discussions about curriculum effectiveness that are grounded in shared experiences of student work, a rarity in many undergraduate majors in which any one piece of student work is assessed by only one faculty member. Because our two-reader system of capstone assessment occurs every semester, by the end of each year, every faculty member typically has read at least four different capstone reports, and discussed those capstone reports with several different faculty members who read the same reports. Because each pair of faculty members reading each capstone report must agree on a single assessment, the capstone assessment process generates scores of discussions among faculty members every year, and every one of those discussions is implicitly or explicitly about (i) clarifying what we are asking students to do, and (ii) the extent to which we believe our students are able to do what we believe our major teaches them to do. But unlike typical

curriculum discussions based on faculty experiences in individual courses, these discussions focus on the same students and the same piece of work, outside the context of any one course. Thus faculty members get a shared and authentic look at what students are able to do as a result of completing their courses.

In summary, our capstone experience not only provides students with an opportunity to apply the skills they developed in our major in a novel context, but it also provides us with an opportunity to assess the educational effectiveness of our curriculum. The assessment process creates a web of interactions within the faculty that provides a 'global' view of the quality of student capstone work. Furthermore, since all students present their work orally at the end of each semester, faculty members also get a general overview of all capstone projects completed each semester. That capstones are essential to our discussions about the effectiveness of our curriculum is evident in most conversations among faculty about our curriculum: to illustrate their perceptions of student abilities (or lack thereof), faculty members typically refer to specific capstone projects and the extent to which students were able to demonstrate competency in various major learning outcomes.

By spring 2001, our faculty had fully developed assessment outcomes, criteria and standards for capstone projects and by this time had become familiar with the capstone assessment process. Consequently, we could spend less time defining what the students were supposed to be doing and more time thinking about how well students were able to demonstrate the competencies that the faculty hoped they were teaching them. At this point in the development of our major, the most common topic of conversation among faculty members was the need to improve students' writing skills. As the faculty engaged in deeper conversation, it became clear that 'writing' meant very different things to different people. Some talked about working with students who had completed outstanding capstone projects, but were not able to convey the quality of their work effectively in writing. Others felt that students were not able to effectively place their work in a broader context. Still others saw students making basic writing errors (e.g. incomplete sentences, changing verb tenses, poorly developed paragraphs, etc.). But the basic conclusion was the same: we need to teach our students how to write better. This conclusion was reinforced by the results of a different form of curriculum assessment, which I describe next.

#### *Employer Scan: writing is the most critical skill*

In addition to alumni, employers can provide valuable insights. Employers are in the best position to tell about the needs of their workplace, both in terms of the number of employees they require and the types of skills employees must possess. (Palomba & Banta, 1999, p. 217)

One of AAHE's Principles of Good Practice for Assessing Student Learning claims 'assessment fosters wider improvement when representatives from across the educational community are involved' (AAHE, 1992). In defining this principle the authors note that assessment 'may also involve individuals from beyond the campus (alumni/ae, trustees, employers) whose experiences can enrich the sense of appropriate aims and standards for learning' (AAHE, 1992). Two of our faculty members put this principle into practice by initiating a scan of organisations that had employed or were likely to employ our undergraduates, graduates or both. They next organised and facilitated a series of crucial discussion forums that involved a total of 35 representatives from a diversity of organisations (governmental, non-profit, entrepreneurial, etc.). Representatives were

asked to first write and then share with the group what skills they would like to see in students graduating from our major. Nearly every person in attendance identified the same skill as her or his top priority: the ability to write effectively. Several representatives specifically noted that while our students often had excellent technical skills, their writing skills were sometimes lacking (adding that the latter was more important than the former, as they could always teach students specific technical skills).

#### *Hiring a Writing and Capstone Coordinator*

The results of the community scan fostered intense departmental discussions about writing, discussions amplified by earlier concerns about student writing raised by the assessment of capstone projects. Ultimately, these discussions resulted in a decision by faculty and staff to create a new faculty line for a capstone and writing programme coordinator, the position I now hold. I was explicitly hired to continue to develop our integrated student and curriculum assessment tool, the capstone, and begin development and implementation of an integrated writing programme. Creating this faculty position was a particularly significant action because this faculty line was a precious resource during a time of very limited budgets and increasing student enrollments, illustrating how integral our faculty and staff believed capstone and writing were to our major's educational effectiveness.

#### **Thinking Through the Curriculum: holistic curriculum development**

Thinking through the curriculum is a continuing, essential activity, where educators question what ought to happen and how to make it happen in practice. (Mentkowski & Associates, 2000, p. 288)

A major challenge to holistic curriculum development is transforming a curriculum perspective into concrete actions that improve the curriculum and foster learning that lasts. Doing this requires that students, staff and faculty be able to think through the curriculum, as defined in the above quote. In this section I describe the concrete processes and activities we engage in to promote thinking through the curriculum.

#### *Writing as Defining the Major*

When I refer to 'writing' in the context of thinking through the curriculum, I am not referring to basic communication and critical thinking skills students learn independent of their field of study; rather, I am referring to a tool we use to define, deliver and assess our curriculum. For example, at the same time staff and faculty made the decision to hire a capstone and writing programme coordinator, they also commissioned a report that outlined a process for creating an integrated writing programme. Creating this report was an important step towards using writing to help students, staff and faculty think through the curriculum. The report accomplished this by presenting a holistic vision of what a student should be able to do after completing our curriculum. From that vision, the report isolated 10 interconnected writing competencies. These included skills such as the ability to gather and process data, the ability to write in different genres and the ability to synthesise and integrate information. The report goes on to illustrate each of these writing competencies through specific, major-based examples. For example, the report did not define and illustrate 'the ability to synthesise and integrate information' in the abstract; rather, it defined and illustrated this skill in the context of a student capstone

project that focused on invasive weed eradication policy. So in presenting major-based illustrations of writing skills, the report was accomplishing more than proposing a means for improving student writing: it was also defining our major. In *Writing and Revising the Disciplines*, Jonathan Monroe elegantly captures our perspective when he says that writing must be understood ‘not merely as a matter of mechanical skill, grammar, or style narrowly conceived, but as a matter of profound intellectual importance and resonance, a concern that reaches to the heart of, and indeed informs at all stages, the shapes fields take’ (Monroe, 2002, p. 5). Our approach is also similar to what Doherty *et al.* (2002, p. 9) refer to as ‘thinking pedagogically’ about disciplines: ‘When faculty have answered for themselves and their students questions like what knowledge bases are appropriate for baccalaureate-level learning, what forms of critical thinking are at the heart of their disciplines, what forms of interaction are necessary to the discourse within and across disciplines, and what values and responsibilities are at the foundation of their disciplines, they have a basis for reflecting pedagogically in their disciplines.’

Anecdotal evidence based on conversations with students indicated a need for stronger curriculum integration in the context of writing instruction. For example, a faculty member told me what he learned from a conversation he had with one of his students who was writing academic essays in one class and writing scientific reports on field experiments in another class. Instructors for both courses were asking this student to work on the same writing issue: the need to better support general empirical claims with specific empirical claims or evidence. However, in working with this student, both instructors were using completely different language, and it was not until the end of the semester that this student realised his two instructors were trying to teach him the same thing. Other students probably never made this connection, and thus the pedagogical power of reinforcement among courses was lost. So by talking across disciplinary lines about writing, we are presented with the opportunity to provide stronger writing instruction throughout the curriculum because we are unable to ‘rely on the common epistemological assumptions and shared language of a disciplinary community’ and instead must ‘explain [our]selves, identify [our] assumptions, and elaborate the informal rules that guide [our] thinking and decision making’, which in turn helps us teach better (Mentkowski & Associates, 2000, p. 317).

### *Student and Faculty Interviews*

To understand what kinds of writing instruction was occurring at what points along the curriculum, as well as to identify what kinds of writing support students and faculty felt they needed, I surveyed and interviewed our students and faculty about writing in our major. I will use this information to create a more comprehensive strategic plan for creating an integrated writing programme within our major that builds constructively upon the current structure.

I asked graduating seniors what kinds of instruction would have better prepared them for their capstone project. Roughly half of the students indicated that they would have liked more explicit writing instruction embedded in the curriculum, either in the form of a new course or by emphasising writing more in existing courses. We also learned about which courses students found helpful and why they found those courses helpful.

Faculty members also provided extensive feedback. In response to a survey sent out immediately following capstone assessment, faculty noted several areas in which they felt student skills were lacking, for example:

They have a difficult time with ‘systems’ thinking—pulling it all together in the end, and thinking about how their project links to a broader system (especially the human/policy component).

[Students have] trouble with understanding their own biases, trouble using data to support an argument, and trouble thinking about how much one might or might not generalize from a limited data set.

[Students have trouble with] synthesis and application of their results towards a realistic, thoughtful and well cited set of recommendations for policy [and the] ability to think and write in a structured and well thought out manner, as opposed to a brain dump of everything that they had ever read or thought or felt on the subject.

There are several things we learn from these faculty comments about student capstone work. First, faculty members feel some students have ‘basic’ writing problems such as poor organisational skills. Perhaps what is a related challenge, faculty also feel students have ‘higher order’ writing problems, such as the inability to place their capstone work in a broader context and, in particular, an inability to apply ‘systems thinking’, the distinguishing outcome of our major. In addition, faculty perceived an inability to acknowledge and demonstrate understanding of data limitations and the inability to understand one’s own biases.

Interviews with a subset of the faculty about student writing in their individual courses raised similar issues, such as an inability to critically evaluate data and organise a paper to effectively support a central thesis, as well as other related issues such as the need to support general claims with specific claims.

From a lower division chemistry instructor about laboratory reports:

Students have a very hard time identifying the strengths and limitations of their conclusions. They have a hard time identifying potential sources of error. They often draw conclusions that are not grounded in the data they collected, nor are they able to think about the implications of their conclusions. It might be helpful to articulate assignments with, for example, courses like biology where they also write lab reports ... we might have lab reports with increasing levels of sophistication as students progress through the program.

From an upper division instructor:

Students really need help with defining a thesis, and then writing a paper that supports that thesis. Students often articulate broad thesis statements that are impossible to support, leading to organizational problems.

From another faculty member who teaches both lower division and upper division courses:

From what I have noticed, students, especially sophomores, have a difficult time separating the scientific writing style from a more popular style. They tend to like to make their papers too dramatic—e.g. ‘agriculture is bad and destroys the environment’—rather than taking a balanced and objective view-point. Also, they tend to not back these statements with any kind of evidence.

In these comments we see evidence of some faculty members actively thinking through the curriculum when talking about ways courses can build on one another. From these interviews I also learned for which skills faculty members were providing explicit instruction and which skills faculty members assumed were taught elsewhere. While these interviews provide us with important information about how we are thinking about



writing in our major, they also serve to prompt faculty members to think about their individual courses as part of a larger curriculum to which they are contributing, and it helps faculty members think about learning goals that include and extend beyond their individual courses.

### *Revising the Junior Entry Course*

At the heart of our efforts to increase the educational effectiveness of our major by promoting thinking through the curriculum is our junior entry course. Every major on our campus is required to offer a course designed to introduce juniors to the interdisciplinary programme they have selected as their major. Our junior entry course: (i) introduces students to our major learning outcomes and capstone process; (ii) helps them develop a learning plan in which they identify future courses and other organised learning experiences (e.g. internships); (iii) provides students with the advanced reading, writing and critical thinking skills they will need to be successful in their upper division courses and capstone work; and (iv) meets our distinctive university-wide upper division writing proficiency outcomes.

Effectively meeting all of these goals in an integrated manner is incredibly challenging, but also presents powerful opportunities for helping the department, students, staff and faculty, think through the curriculum. The goals specified for this course must not only be integrated within the course, they must also be integrated with the entire curriculum, both within and beyond our major. Because the skills developed in the junior entry course must build on skills developed in the lower division and provide a foundation for success in upper division courses and capstone, as well as be linked to the larger institution through the university-wide writing outcomes, those designing this course must think through the curriculum; this is not a course that can be designed in isolation. Success requires that we define the major for ourselves so that the instructors of the junior entry course can define the major for students, an activity we would not rigorously engage in if such a course were not a mandatory part of our curriculum.

Our current efforts to improve our junior entry course illustrate how we use capstone assessment and our junior entry course to foster thinking through the curriculum. For example, making our major's distinguishing learning outcome, the ability to apply a systems approach to applied problem solving, an explicit component of capstone assessment improved students' ability to demonstrate basic competency in this outcome in their capstone. However, faculty members were still not satisfied with the depth at which students were meeting this outcome in their capstone work. As a result, we attempted to infuse more explicit instruction on this outcome into our junior entry course. However, when the faculty members who took on this challenge tried to do this, they discovered that the department did not have a shared understanding of what this outcome meant. Hence, we were most likely not teaching to it effectively throughout our curriculum, explaining why our students were having trouble demonstrating this outcome with their capstone work. Consequently, our department provided funding for three faculty members (including myself) and an outside consultant to revise our junior entry course so that it provided students with the foundational skills needed to meet our major's distinguishing 'systems approach' learning outcome, while at the same time improving students' writing skills.

The redesigned junior entry course carefully guides students, step by step, through the process of developing two major integrated projects: an individual learning plan and a case study of an environmental policy issue. The individual learning plan asks students

to name their personal and professional goals, interview three professionals in careers they are interested in pursuing, identify an area of concentration within the major, choose an academic faculty advisor and select appropriate upper division courses. The case study project asks students to identify an environmental policy research question and do a detailed analysis in which they identify alternative policy solutions, identify relevant scientific research, explain how different solutions differentially affect relevant stakeholders and make a recommendation based on their analysis. At various points throughout the course, panels of speakers consisting of graduates from the major, future employers, politicians and other community members visit the class for the purpose of providing students with a real world context for their work.

Writing is an integral component of this course. For example, the course introduces students to the writing competencies defined by the report described above. Additionally, we embedded the university mandated upper division writing exam into this course. During the first week of class students complete an in-class and a take-home writing assignment we use to identify students who need additional writing support; these students are then placed in tutorial groups run by professional writing tutors. Additionally, all students complete weekly writing assignments that build to the final individualised learning plan and case study and throughout the course students receive explicit instruction on writing and extensive feedback on written work. The result is that students simultaneously explore their career goals, link their career goals to the curriculum and develop advanced writing and critical thinking skills in a disciplinary context.

Transforming our work on our junior entry course into a more effective curriculum requires that we involve the entire department; simply revising a single course in isolation is not enough to promote a curriculum perspective. As a result of our work on our junior entry course, those of us involved in the project advanced and deepened our personal understanding of our major, and we felt it was important that we share that deeper understanding with our colleagues. Consequently, we facilitated a departmental discussion in which we introduced the redesigned junior entry course and the conceptual and pedagogical approaches we designed to help students understand our distinctive, interdisciplinary approach to environmental science and policy. Next we plan to evaluate the effectiveness of this approach and again share what we learn with the faculty. Engaging faculty and staff in continuing discussions about our 'systems approach', discussions informed by interactions with our students, will help us all, students, staff and faculty, come to a deeper, shared understanding of our major and, from that, improve teaching and learning in lower division courses, in the junior entry course, and in upper division courses.

## Conclusion

The power of the approach illustrated by this case study is that while deeply philosophical, our discussions remain grounded in our concrete, day-to-day activities. What is emerging in our department is a core structure consisting of multiple, concrete activities that promote ongoing thinking through the curriculum. This structure consists of four major, interdependent components (Figure 1).

1. Our junior entry course prompts us to articulate and communicate to students the distinctive nature and outcomes of our major and identify and nurture the foundational skills students need to successfully complete our major.

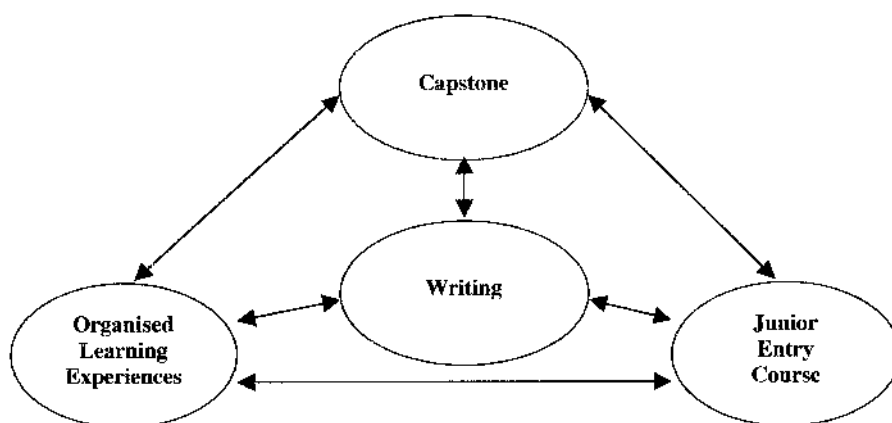


FIG. 1. The four major interdependent components that we use to promote holistic curriculum thinking are our organised learning experiences (or courses), the junior entry course, capstone and writing.

2. Capstone prompts us to articulate and communicate exactly what we expect students to be able to do as a result of engaging with our curriculum and it allows us to assess the extent to which we, staff, faculty and students, have been successful.
3. Our suite of organised learning experiences, or courses, is the largest, most complex component of this structure; as a group they exist in a dynamic relationship between our junior entry course, which presents these learning experiences to students so that they can make informed decisions about which courses to take based on their personal and professional goals, and capstone, which builds upon the skills students develop in their organised learning experiences.
4. Writing has emerged as the primary tool we are infusing throughout this structure to help ourselves more clearly identify the skills we wish our students to acquire before graduating, assist students to develop those skills and assess the extent to which students have attained those skills.

Although individually none of these components is novel, what makes our approach distinctive is the way we promote ongoing integration among these components, starting with the decision to hire a faculty member whose primary professional interests lie in promoting a holistic curriculum perspective among students, staff and faculty. As that faculty member, I believe my role is to identify holistic curricular issues and promote faculty and staff discussions that help us understand what we want to teach and how we want to teach it, as well as engage us all in continuously assessing the effectiveness of our curriculum.

Our approach is also distinctive due to the ways we use our junior entry and capstone courses as scaffolding for our curriculum. Identifying and teaching to the outcomes for these learning experiences achieves two very important goals. First, the process of naming outcomes is a concrete activity that engages the entire faculty in discussions that promote holistic understanding and development of our curriculum. Second, presenting these outcomes to students helps them better understand how all the pieces of what they are learning fit together and better understand why we have created the curriculum we have, key factors in promoting learning that lasts.

Finally, through the ongoing process of creating an integrated writing programme from within the major, we are both defining the major and creating an integrated means

of curriculum and student assessment. In doing this, we have made every attempt to follow good assessment practices, particularly with respect to using assessment as an ongoing practice that provides all of us, students, staff and faculty, with the information we need to monitor, evaluate and continuously improve our effectiveness.

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### Notes on Contributor

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